# CS 255 Business Requirements Document Template

## System Components and Design

### Purpose

*What is the purpose of this project? Who is the client and what do they want their system to be able to do?*

 The purpose of this project is to design a system for DriverPass that provides online practice exams and on-the-road driving lessons to help students pass their driving tests.

 The client, DriverPass, wants the system to allow users to take online tests, schedule driving lessons, track user activities (e.g., reservations, cancellations), and ensure secure data management.

### System Background

*What does DriverPass want the system to do? What is the problem they want to fix? What are the different components needed for this system?*

* DriverPass wants the system to solve the problem of students failing driving tests due to inadequate preparation. More than 65% of students fail their driving exams because they only study previous tests.

### Objectives and Goals

*What should this system be able to do when it is completed? What measurable tasks need to be included in the system design to achieve this?*

 Provide online practice exams.

 Allow users to schedule on-the-road driving lessons.

 Enable staff (e.g., secretary) to manage appointments and driver schedules.

 Track lesson packages purchased by customers.

##  Support notifications about DMV updates.

## Requirements

### Nonfunctional Requirements

*In this section, you will detail the different nonfunctional requirements for the DriverPass system. You will need to think about the different things that the system needs to function properly.*

#### Performance Requirements

*What environments (web-based, application, etc.) does this system need to run in? How fast should the system run? How often should the system be updated?*

 The system should be web-based and accessible on both mobile devices and computers.

 The system should provide quick response times, with each page loading within 2-3 seconds.

 Updates to the system should be made quarterly to ensure compliance with DMV rules.

#### Platform Constraints

*What platforms (Windows, Unix, etc.) should the system run on? Does the back end require any tools, such as a database, to support this application?*

 The system should run on Windows and Unix operating systems.

 A cloud-based infrastructure should be used to handle backups and ensure high availability.

 The back-end should include a database for storing user information, driving lessons, and exam data.

#### Accuracy and Precision

*How will you distinguish between different users?* *Is the input case-sensitive? When should the system inform the admin of a problem?*

 The system should differentiate between different user roles (customers, secretaries, IT officers) through unique credentials.

 All input fields, including passwords, should be case-sensitive.

 The system should alert administrators if any data discrepancy or error occurs (e.g., data corruption or failed login attempts).

#### Adaptability

*Can you make changes to the user (add/remove/modify) without changing code? How will the system adapt to platform updates? What type of access does the IT admin need?*

 The system should allow the IT admin to disable or modify lesson packages without needing to change the underlying code.

 The system should adapt to platform updates by being compatible with new browser versions and cloud platform upgrades.

 IT administrators need access to reset user passwords, block access for terminated employees, and manage user roles.

#### Security

*What is required for the user to log in? How can you secure the connection or the data exchange between the client and the server? What should happen to the account if there is a “brute force” hacking attempt? What happens if the user forgets their password?*

 Users should log in using a secure password, which is validated during login attempts.

 All data exchanges between the client and the server should be secured using SSL encryption.

 After five failed login attempts, the user’s account should be locked, and an email should be sent to the IT administrator.

###  If the user forgets their password, they should be able to request a password reset link via email.

### Functional Requirements

*Using the information from the scenario, think about the different functions the system needs to provide. Each of your bullets should start with “The system shall . . .” For example, one functional requirement might be, “The system shall validate user credentials when logging in.”*

 The system shall allow users to register and create accounts with personal details.

 The system shall validate user credentials when logging in.

 The system shall allow users to schedule, modify, or cancel driving lessons.

 The system shall display available times, drivers, and cars for lesson scheduling.

 The system shall track all changes made to reservations and display who made the change.

 The system shall allow the IT administrator to reset passwords and modify user roles.

 The system shall provide practice exams and track the student’s progress.

 The system shall notify users when DMV policies or rules are updated.

### User Interface

*What are the needs of the interface? Who are the different users for this interface? What will each user need to be able to do through the interface? How will the user interact with the interface (mobile, browser, etc.)?*

 The interface should be web-based and accessible via both mobile and desktop browsers.

 Different users (customers, secretaries, IT officers) will have distinct interfaces based on their roles.

* Customers: Schedule lessons, view progress, take exams.
* Secretary: Manage reservations, view and assign drivers and cars.
* IT officers: Reset passwords, block accounts, manage user roles.

 The user interface should be simple, with clear navigation to different sections like scheduling, account management, and test-taking.

### Assumptions

*What things were not specifically addressed in your design above? What assumptions are you making in your design about the users or the technology they have?*

 It is assumed that all users will have access to the internet and basic familiarity with using online services.

 It is assumed that the DMV will provide timely updates regarding policy changes, and the system will have internet access to receive these updates.

 The system will rely on external tools (e.g., cloud service providers) for backups and data recovery.

### Limitations

*Any system you build will naturally have limitations. What limitations do you see in your system design? What limitations do you have as far as resources, time, budget, or technology?*

 The system will not include features for future module additions in this release, but it will allow disabling or enabling packages.

 The initial budget does not cover advanced analytics or predictive tools for scheduling optimization.

 Due to time constraints, customization of lesson packages will require developer intervention rather than being easily modifiable by non-technical users.

### Gantt Chart

*Please include a screenshot of the GANTT chart that you created with Lucidchart. Be sure to check that it meets the plan described by the characters in the interview.*

A graph with blue rectangles

Description automatically generated